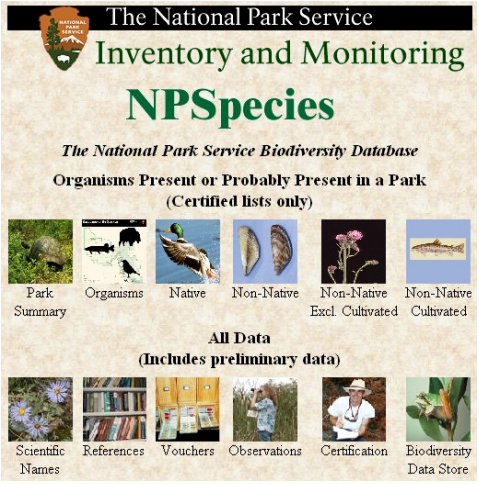
Natural Resource Inventories

Introduction

Natural resource inventorying is the process of acquiring information on park resources, including the presence, distribution, and condition of plants, animals, soils, water, air, geological features, biotic communities, natural processes, and human- induced changes in those resources. Inventories are designed to contribute to a statement of the condition of park resources, which is best described in relation to a standard condition such as natural or unimpaired. Inventories involve both the compilation of existing information and the acquisition of new information.

Park inventories include general and specific descriptive data and historical records. Information collected includes things like legal descriptions, climate information, land classifications, topographic maps, watershed delineations, surficial and bedrock geology maps, hydrologic information, water quality data, air quality data, species lists, vegetation maps, documentation of fires, insect, and disease infestations, etc.



NPSpecies - Service wide species inventory project.

Management Needs

In a world in which natural places have become few and precious, knowledge of the composition and function of relatively unaltered natural systems is invaluable. This program provides a fundamental knowledge of those systems and the technical basis for "ecosystem management".

Natural resource inventories have three primary uses:
• Documentation of the occurrence, location, and condition of park resources

• Identification of rare, threatened, or endangered species and ecosystems for purposes of directing management

• Development of a foundation for implementation of status and trend or monitoring programs

Current Activities

Park staff members along with a number of cooperators have been heavily involved in assembling natural resource information for Shenandoah. Most recently, a revised Vegetation Map has been prepared for the park. Other types of mapped products have been in existence for a number of years. These include topographic, hydrologic, and base cartographic information. Current mapping efforts are mostly focused on development of a comprehensive Geologic Map of the park. This is a joint effort between park staff, staff from the Geologic Resources Division of the National Park Service, and the U.S. Geological Survey.

Inventory efforts also extend to the collection and management of voucher specimens, preparation of species lists, and preparation of various data sets. All of these efforts are currently underway at Shenandoah. The most significant voids in inventory information pertain to terrestrial invertebrates, small mammals, and soils.

Particularly critical to the development of an understanding of what is known about park resources is the assembly of references and bibliographic information. Currently the park has between 3000 and 4000 records in the Natural Resource Library and the database known as NatureBib. Substantial work on the library and database was done in 2004 but will need to continue during 2005.

References

Two key documents have been prepared very recently that summarize the condition of park air and water resources. These documents will be supplemented by a Natural Resource Assessment document and a Geologic Resource Evaluation Report that are currently in preparation.

Sullivan, T.J., et al. 2003. Assessment of air quality and related values in Shenandoah National Park. Technical Report NPS/NERCHAL/NRTR- 03/090. Natural Resource Stewardship and Science, Northeast Region, National Park Service, Philadelphia, Pennsylvania.

Vana- Miller, D.L. and D.P. Weeks, 2004. Shenandoah National Park, Virginia, Water Resources Scoping Report. Technical Report NPS/NRWRS/NRTR- 2004/320. National Park Service, Water Resources Division, Ft. Collins, Colorado.